

METROPOLITAN AREA PLANNING

First of a series of Journal articles outlining perspective, problems, and possibilities of urban renewal and community betterment in Metropolitan Toronto

This introductory presentation is by H. Blumenfeld, Assistant Director, Planning Board, Metropolitan Toronto



H. BLUMENFELD

THE Toronto area is the first community in the Western Hemisphere which has given official political recognition to the fact that modern industrial society has created a new form of human settlement: The Metropolitan Area. Throughout history men have lived either in the city or in the country. The modern metropolis is neither; it partakes to some degree of both.

The metropolitan area differs from the historical city both in function and form. In pre-industrial ages the vast majority of the people lived in the country and it was there that the world's work was

done. The city was primarily the seat of the political, religious, commercial, and cultural leaders of society. This important "central" function is still being fulfilled by the modern metropolis and it has become more important and complex than ever before. But in addition the metropolis is also the most important seat of material production. The largest group of its population is engaged in manufacturing commodities for the nation and the world. Thus the metropolis combines the two functions — leadership and production — which were previously divided between city and country.

Elasticity: In its form the metropolitan area no longer shows the sharp division between the densely built town and the open country. Areas developed at varying dens-

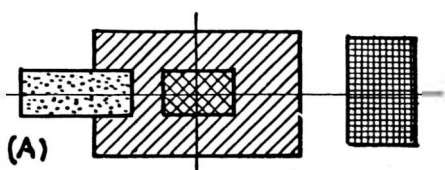
ities are interspersed with open areas used for recreation and agriculture. There is no fixed boundary and, apparently, no definite interior structure such as the system of streets and squares provided in the traditional city.

The problem of the form of the metropolis concerns, first, the relation between built-up and open areas and, second, the relation between the area of the "central" functions, the industrial areas, and the residential areas. The very existence of separate areas for work and for residence is, in itself, something radically new, a product of the industrial revolution.

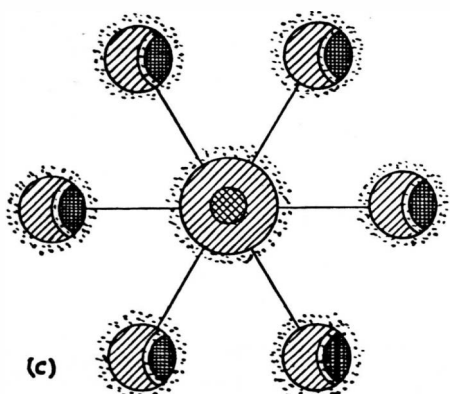
We may expect that the form of the metropolis will ultimately be determined by the same factors that brought it into being: the increasing division of labor and the in-

- (A) **Concentric City**—Based on business centre; industry not an organic part of scheme.

Industry located on leeward side. Green areas on windward side and interspersed throughout city.



Scheme of Concentric City



Scheme of Central City with Satellite Cities

Short or moderate distance to business centre; long distance to industry. No provision for growth.

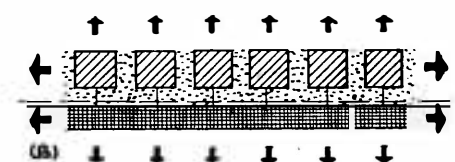
- (B) **Ribbon City**—Based in industry; no provision for business centre.

Industry located on leeward side. Green areas between industry and residences and between residential neighbourhood units.

Short distance to industry. Growth both by accretion to existing industrial and neighbourhood units and by foundation of additional units.

Short or moderate distance to industry and to city centre.

Growth of residential and industrial areas by accretion; limited growth of city centre possible.



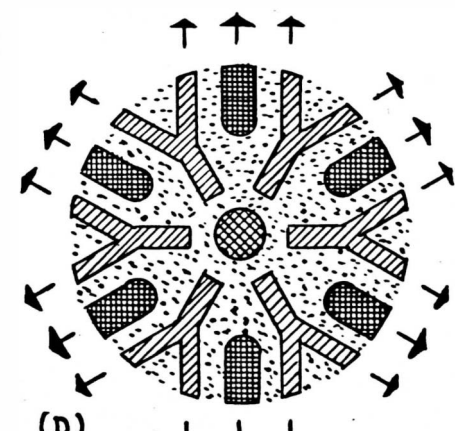
Scheme of Ribbon City

- (C) **Central City with satellites**—Function of central city not clearly defined; satellites based on industry.

Industry located on leeward side of each satellite. Green areas in each satellite between residences and industry and around each satellite.

Short distance to industry; long distance to central city.

Growth only by foundation of new satellites; no provision for growth of business centre.



Star-shaped City

- (D) **Star-shaped City**—Based on business centre and industry.

No relation to direction of prevailing winds.

Green areas between residences, industry, and business centre.

creasing efficiency of transportation.

"Specialized division of labor, forces workers to live in big cities", said a German economist almost two hundred years ago. Only here do they find a wide choice of employment. Inversely, only here has management a wide choice of workers with various specialized qualifications as well as of specialized suppliers. These supplying firms in turn are attracted by the wide market. Thus the process of metropolitan growth feeds on itself and is likely to continue, dire prophecies of its impending doom notwithstanding.

The only visible limit to the growth of the economy and population of a metropolitan area is the size of its "hinterland", the region which serves as its source of supplies and as the market for its goods and services. The boundary of this region—fairly elastic in a competitive economy—is determined by the means of transportation between the metropolis and the other parts of its region.

While long-distance transportation in this manner determines the size of the economy and the population of the metropolis, the size and shape of its built-up area are determined by short-distance transportation, by the means of commuting within the metropolitan area.

Larger Areas: It is important to note that the modern means of long-distance transportation and communication — steamships, railroads, and telegraph — were developed about half a century earlier than those used within a metropolitan area — electric traction, the automobile, and the telephone. As a consequence people first were concentrated in big compact cities which only later transformed themselves into still bigger and vastly more extensive metropolitan areas. We are only in the beginning of this transformation.

Because of the highly developed division and specialization of labor, all parts of the metropolitan community are strongly dependent on each other, and mutual accessibility is its primary need, which also sets its limits. A metropolitan area extends as far as daily commuting is possible, and no farther.

From the need for the best possible mutual accessibility derive two apparently contradictory re-

quirements. There should be minimum need for commuting, but maximum possibility for commuting. People should be able to find a job close to their home, but they should also be able to work anywhere in the area; and inversely management should be able to draw on the labor force of the entire area. Therefore industries should be distributed throughout the metropolitan area so that in each of its sections there is an approximate balance between labour force and available jobs. At the same time, the entire metropolitan area should be planned in such a way that efficient transportation between all of its points is possible.

All Purpose Area: If the metropolitan area were merely an industrial area, and if man's only purpose consisted in making a living,

this would result in a compact development with an even distribution of industry, the whole connected by a large-scale grid of transportation lines. However, making a living is only a means for living, and the area functions not only as a complex of workshops, but also as a leading centre for a surrounding region.

These central functions, which serve the population and industry of the metropolitan area itself as well as the wider region, must be accessible to all. They are assembled in the central business district, the core of the city. There are at present in most central business districts some things which do not need to be there. However, the central location is essential for two groups of establishments: first, all those which exist only once in the area and must be accessible from all sides; including financial, government, commercial, and cultural establishments; and second, all those which are linked to the first group, e.g., lawyers, or printers.

The existence of the centre has the most profound influence on the whole pattern of the area. It can be observed that density of population and rates of growth form regular concentric patterns. The growing population spreads out from the centre like a wave spreads out from a stone thrown into a pond. The crest of the wave — the area of most intensive growth — moves out from decade to decade in so regular a pattern that fairly reliable predictions can be made about future population and density in the various parts of the metropolitan area.

Garden City: This pattern is, of course, the result of the desires and actions of people who seek better conditions for living. Ebenezer

Hans Blumenfeld

Studied Architecture at Polytechnical Institute at Munich, Karlsruhe, and Darmstadt (Germany) 1911-14 and 1919-21; graduated Darmstadt 1921. Courses in City Planning, Columbia U., New York, 1939-40; in Statistics 1941-42 and in Public Administration 1950-51 at U. of Pennsylvania.

Architectural Draftsman and Designer, Germany, U.S.A. and Austria, 1921-30.

City Planner with State City Planning Institute, Moscow and Gorki; U.S.S.R. 1930-33.

Architect and Site Planner, Makeyevka and Moscow, U.S.S.R. 1934-37, and in New York and Jersey City in 1939-40.

Research Director, Philadelphia Housing Association, 1941-44.

Senior Land Planner 1945-48 and Chief of Division of Planning Analysis, Philadelphia Planning Com. 1948-52.

Planning Consultant, Philadelphia, Pa. 1953-55.

Assistant Director, Planning Board, Metropolitan Toronto.

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Howard, the father of the "Garden City" idea, said people are attracted by two "magnets": town and country. Whatever we may think of Howard's prescription, his diagnosis was certainly correct. Hence to the pair of requirements which we derived from the function of the metropolis as a place for making a living — balance between population and employment in every sector, and feasibility of transportation between all sectors — we have to add another pair of requirements derived from the function of the metropolis as a place for living: easy access both to the city centre and to open country.

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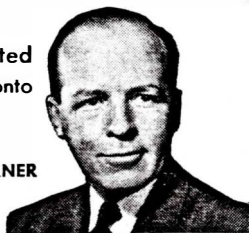
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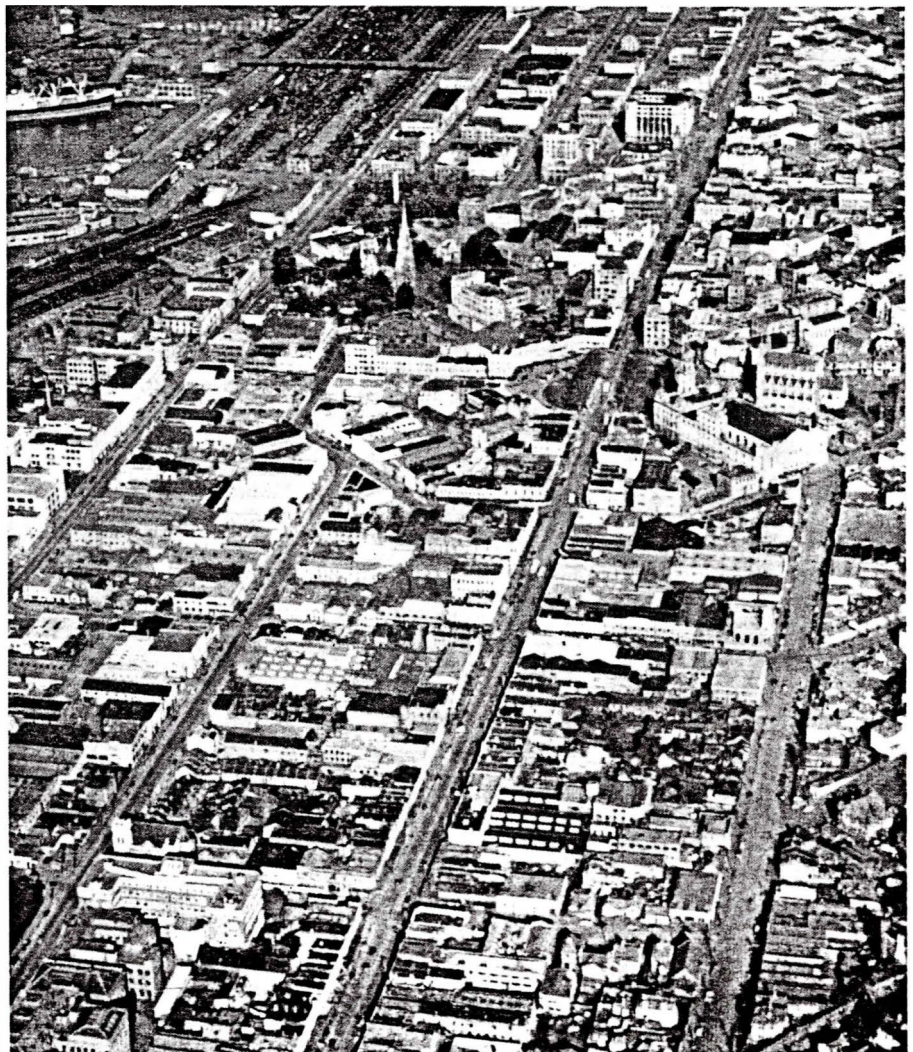
Most people try to satisfy these two conflicting requirements by moving to the suburbs so that they may have the city nearby on one side and the country on the other. But as more and more people move out into ever widening rings of suburbs, they move farther and farther away from the city, and the country moves farther and farther away from them. The present pattern of suburban growth is self-defeating.

There have been a number of proposals for a radically different pattern. The adherents of the "Garden City" originally proposed to disperse the population into a number of small towns, each limited in size so as to maintain easy access to the surrounding countryside which was to be preserved as a permanent "greenbelt". In modified form this proposal has been adopted by the British Government in building "New Towns" as "satel-

lites" in which to relocate the "overspill" of industry and population from London and other big cities.

The British New Towns are admirable achievements. However, all those of their residents who want to go to the central city or to any other part of the metropolitan area for work, business, social or other purposes have to travel longer distances than would be necessary under other arrangements.

While the Garden City program attempts to transplant the city into the country, the famous Swiss architect Le Corbusier, in his utopia of a "Radiant City", wants to transplant into the city some characteristics of the country: sunshine, space, greenery. He tries to achieve this by concentrating residences as well as offices in large, widely spaced skyscrapers. There is no definite place in this scheme for industry which is somewhat casually



• DUNEDIN, NEW ZEALAND: An example of the classical town centre showing the symmetrical form which was originally developed in Europe during the 17th and 18th centuries. Although the exact design and form of this city centre may not be appropriate for the present time, many of the principles of its composition are still applicable, the central "green area", public building and town hall being designed in a pleasing arrangement in the business heart of the city.

relegated to a separate district on the leeward side of the city or, in a later version, into separate settlements.

Ribbon City: If the "Radiant City" is based only on the "central" function of the metropolis, ignoring industry, Russian planners, at the time their country embarked on its first five-year plan of rapid industrialization, went to the opposite extreme in their scheme of a "Ribbon City". Factories and workers' settlements were to be lined up in two parallel zones, with industry on the leeward side. A green zone or strip would separate the two. Each pair of factory and settlement would be separated from its neighbors by smaller green zones and connected with them by a highway and rapid transit line which would run in the central green strip. There would be ample space for extension of individual factories and settlements by broadening the ribbon, and for extension of the entire city, by adding more industry-plus-settlement units to its length.

While this scheme was rejected because of its lack of a centre, the idea may be valid if applied to some sectors of a metropolitan area.

Such ribbons might fan out from the centre. We then have a "finger" or star-shaped scheme, such has been adopted, for instance, for Greater Copenhagen and proposed for the metropolitan area of Philadelphia and other big cities.

Finger Scheme: While the centre might well acquire some of the characteristics of the "Radiant City", the "fingers" might be developed as strings of "satellite" towns, each with a reasonable balance of employment and population and each with its own small business and community centre. Each of these communities might in turn be divided into well organized "neighborhoods", as is being done in the British "New Towns". They would not be surrounded by green belts, but would have easy access to green "wedges", large stretches of open land which would extend from the surrounding countryside towards the centre of the metropolis, separating the "fingers". Rapid transit lines would radiate from the centre along the roads, by private centre along the spine of each "finger". Movement in other direction would be on roads, by private car or bus.

The "finger" scheme, combining most of the advantages of the three others, seems to fulfill our four requirements: mutual accessibility, both within the entire area and within each of the smaller balanced communities out of which it is composed; and easy access both to the urban centre and to open country.

Pattern for Metropolitan Toronto: In practice this, like any other scheme, would of course be modified by geographical and historical conditions. In Toronto, one half of the potential "fingers" would be cut out by Lake Ontario. Because locations close to the lake have substantial advantages for transportation, water supply, sewage disposal, and drainage, the two fingers extending along the lakeshore would be longer and thicker than those to the north, and the overall shape of the area may approach a ribbon. The green wedges would follow the ravines rather than any strict geometrical pattern. However, if the desirable future shape of the Toronto Metropolitan Area is to be visualized in the simplified form of any particular scheme, the "finger" pattern is the most appropriate.



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